

126344-1

**REMARKS**

Claims 1-25 are pending in the present Application. Claims 17-23 and 25 have been withdrawn from consideration. Claim 7 has been canceled, Claim 1 has been amended, and no claims have been added, leaving Claims 1-6, 8-16, and 24 for consideration upon entry of the present Amendment.

Claim 1 has been amended to include the limitation "wherein the graphite has average particle sizes of about 1 to about 5,000 micrometers." Support for this amendment can at least be found in Claim 7 as originally filed as well as in Paragraph [0093] as originally filed.

No new matter has been introduced by these amendments or new claims.

Reconsideration and allowance of the claims are respectfully requested in view of the following remarks.

**Elections/Restrictions**

In response to the Restriction Requirement dated September 6, 2005, Applicants elected to prosecute Claims 1-16 and 24. Accordingly, Claims 17-23 and 25 have been withdrawn from consideration.

**Information Disclosure Statement**

Applicants note that the Examiner has not considered the art submitted in the Information Disclosure Statement. Applicants respectfully request that the art submitted in this Information Disclosure Statement be considered and a fully initialed PTO Form A820 be returned to the Applicants.

**Claim Rejections Under 35 U.S.C. § 103(a)**

Claims 1-16 and 24 stand rejected under 35 U.S.C. § 103(a), as allegedly being unpatentable over U.S. Patent Application No. 2002/0183438 to Amarasekera et al. (Amarasekera) in view of U.S. Patent Application No. 2005/0070657 to Elkovitch et al. (Elkovitch) and U.S. Patent No. 5,591,382 to Nahass et al. (Nahass). (Office Action dated 12/06/2005, page 2) Applicants respectfully traverse this rejection.

126344-1

The Examiner has stated that Applicant's use of both nanosized conductive fillers and graphite would expectedly yield an additive effect since a nanosized conductive filler may actually be graphite. (Office Action dated December 6, 2005, page 3).

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

As currently amended, the present invention is directed to an injection moldable conductive composition comprising an organic polymer; a nanosized conductive filler and/or carbon fibers having a diameter of greater than or equal to about 1,000 nanometers; and graphite, wherein the graphite has average particle sizes of about 1 to about 5,000 micrometers. (Claim 1).

Amarasekera is directed to a conductive filler comprising small carbon fibers with carbon powder and/or a fibrous non-conductive filler. (Abstract; see paragraphs [0010] and [0019]). The small carbon fibers may either be vapor grown carbon fibers (VGCF) or carbon nanotubes, or a combination of both. (see paragraph [0010]). The VGCF, which may be graphitized, have diameters of about 3.5 to about 2,000 nanometers. (see paragraph [0019]). The Examiner has stated that the carbon nanotubes of Amarasekera correspond to the nanosized conductive filler of the claimed invention. (Office Action dated 12/06/2005, page 3) Amarasekera teaches that the carbon powder is carbon black having average particle sizes of less than 200 nm. (see paragraph [0019]) Amarasekera, however, does not teach graphite having average particle sizes of about 1 to about 5,000 micrometers as required by Claim 1 as presently amended. For this reason at least Amarasekera does not teach all elements of the claimed invention.

Elkovitch teaches compositions of thermoplastic and/or thermoset polymers, a single walled nanotube composition and a nanosized conductive filler. (See Abstract)

126344-1

Applicants respectfully submit that Elkovitch is unavailable as prior art.

35 U.S.C. § 103(c)(1) provides:

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Elkovitch was filed on September 29, 2003, which is one day before the filing date of the present application, September 30, 2003. Elkovitch was published on March 31, 2005, about 18 months after the filing date of the present application and is therefore not available under 35 U.S.C. § 102(a). Therefore, Elkovitch is available as prior art only under § 102(e). Both the present application and Elkovitch are under obligation of assignment to the General Electric Company. For these reasons, Applicants submit that Elkovitch cannot be relied on as prior art for the § 103(a) rejection.

Nahass is directed to a polymeric composition having improved toughness and conductivity comprising carbon fibrils, at least a portion of which are in the form of aggregates, wherein, as measured on an area basis, substantially all of the aggregates are less than about 35 micrometers in diameter. (Abstract) The Examiner has stated that Nahass teaches that it is common to form carbon fibers from polyacrylonitrile or pitch. (Office Action dated December 6, 2005, page 4). The carbon fibrils of Nahass are similar to the small carbon fibers of Amarasekera. Nahass does not teach or disclose the use of graphite and therefore, like Elkovitch, does not make up for the deficiency of Amarasekera.

In addition, there is no motivation to combine references. In the first instance, since the claimed graphite is significantly larger in size than the carbon black of Amarasekera, one of ordinary skill in the art would not be motivated to modify Amarasekera with either of Elkovitch or Nahass. Since Nahass does not teach the use of graphite having a particle size of 1 to 5000 micrometers, one of ordinary skill in the art would not have modified Amarasekera with Nahass.

The Examiner has stated that the nanosized conductive filler of Amarasekera "may actually be graphite," the presently claimed graphite itself is not a nanosized conductive filler. (Office Action dated December 6, 2005, page 3). From the Examiner's statements, it appears

126344-1

that the Examiner has construed the small conductive fillers of Amarasekera to serve as being equivalent to the claimed nanosized conductive filler as well as the claimed graphite. Applicants respectfully disagree.

As noted in paragraph [0015] of Amarasekera, the small carbon fibers are cylindrical in geometry having diameters of 3.5 to 2000 nanometers and have tree-ring and fishbone structures. The small carbon fibers of Amarasekera are therefore similar to carbon nanotubes. They are however, not similar to the claimed graphite. As may be seen in paragraph [0091] of the instant specification, the claimed graphite can be of three types flake, amorphous graphite or crystal vein. Thus the claimed graphite cannot be similar to the carbon nanotubes and one of ordinary skill in the art would find no motivation to modify Amarasekera or to combine Amarasekera with Elkovitch and Nahass in the manner made by the Examiner.

Even if a prima facie case of obviousness were conceded, which it is not, it is respectfully submitted that Applicants' invention is not obvious because the particular combination of claimed elements results in unexpectedly beneficial properties. An applicant can rebut a prima facie case of obviousness by presenting comparative test data showing that the claimed invention possesses unexpectedly improved properties or properties that the prior art does not have. *In re Dillon*, 919 F.2d 688, 692-93, 16 U.S.P.Q.2d 1987, 1901 (Fed. Cir. 1990).

For example, Table 1 of the present application lists samples that contain a total amount of about 70 wt% electrically conductive filler (i.e., graphite and the nanosized dispersion filler). From Figure 1, it may be seen that the samples in Table 1 containing a combination of the graphite and the nanosized conductive filler have superior electrical properties (better conductivity) than those samples that contained only the graphite. Further it may be seen that samples containing the 68 wt% graphite and the 2 wt% carbon black (Sample 3) display an electrical conductivity that is at least over 100% superior in their electrical properties over Sample 1 which contains only the graphite. The results also clearly show that the addition of a very small amount of the nanosized conductive filler has a pronounced effect on the electrical conductivity of the composition. these results also show that the combination of graphite with nanosized conductive filler and/or carbon fibers provides a synergistic effect, which is greater than the additive effect mentioned by the Examiner.

126344-1

Additionally, it is submitted that the use of graphite having particle sizes of 1 to 5000 micrometers, permits the use of large amounts of graphite, especially when compared with the amount of carbon black used by Amarasekera. Amarasekera discloses that carbon black can be used in amounts of up to 25 wt%. (see paragraph [0020] The Examples of the present applications demonstrate that graphite can be used in amounts of 55 to 80 wt%. The larger size of the graphite permits the use of larger quantities of the conductive filler than would be possible with the carbon powders of Amarasekera.

Applicants therefore believe that the Examiner has not made a prima facie case of obviousness over Amarasekera in view of Elkovitch and Nahass. Applicants therefore respectfully request a withdrawal of the obviousness rejection and an allowance of the claims.

It is believed that the foregoing remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and withdrawal of the rejection and allowance of the case are respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-1131.

Respectfully submitted,

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